

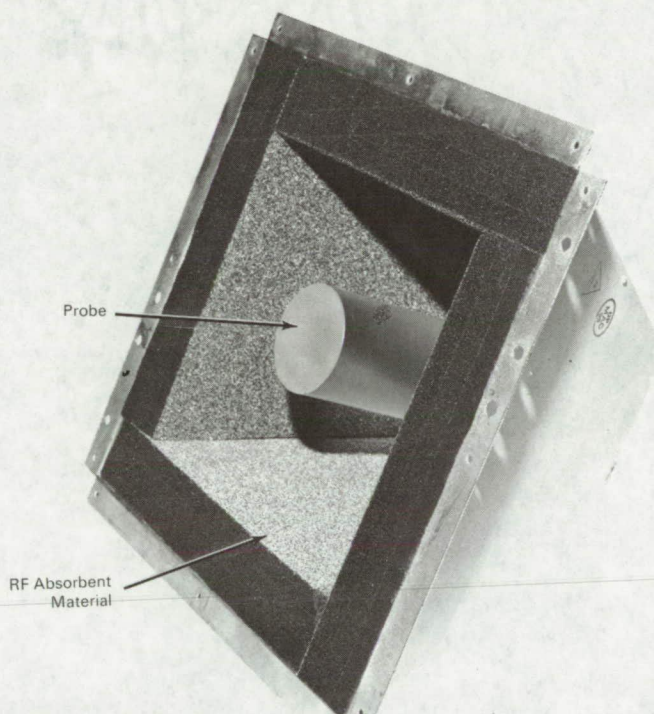
NASA TECH BRIEF



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Low-Loss "C" Band Parasitic Probe

XKS 09348



The problem:

To design a device that can, at one and the same time, receive an rf signal from a transmitter at low power levels and receive it clearly by a technique of inhibiting stray radiation or "noise".

The solution:

A low insertion-loss "C" band parasitic probe, for coupling rf energy from a transmitting medium to a receiving medium with a minimum of interference in order to minimize power requirements.

How it's done:

A housing of suitable configuration is made of an rf-absorbent material and within it are mounted a polystyrene rod and helix antenna that form the operating low-loss "C" band parasitic probe. The polystyrene rod acts as a dielectric low-loss path for rf energy. An insertion loss of 10 db is realized by cementing this rod to the face of a receiving medium helix antenna installed in a housing lined with rf-absorbent material.

(continued overleaf)

Notes:

1. This probe requires 20 db less signal than conventional devices, thus increasing overall system efficiency by a like amount.
2. No additional documentation is available.
3. Technical questions may be directed to:
Technology Utilization Officer
Kennedy Space Center
Kennedy Space Center, Florida 32899
Reference: B69-10251

Patent status:

This invention is owned by NASA, and a patent application has been filed. Royalty-free, non-exclusive licenses for its commercial use will be granted by NASA. Inquiries concerning license rights should be made to NASA, Code GP, Washington, D.C. 20546.

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